

MINNESOTA ENVIRONMENTAL QUALITY BOARD

EQB DOCKET NO. 03-62-PRP-MNSP

APPLICATION

FOR PIPELINE ROUTING PERMIT AND FOR PARTIAL EXEMPTION FROM PIPELINE ROUTE SELECTION PROCEDURES

(Pursuant to Minnesota Rules, Chapter 4415)

To Permit

**Approximately 6.4 Miles of New 4 ½-Inch Natural Gas Pipeline
In**

Jackson and Nobles Counties.

**Minnesota Soybean Processors
(MnSP)**

Submitted: May 2003

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MAPS

- A. Proposed Pipeline Alignment Sheet with details
- B. Nobles County Map
- C. Jackson County Map

ATTACHMENTS

- 1. List of affected landowners – ROW Grantors
- 2. List of nearby landowners

4415.0115 GENERAL INFORMATION

Subpart 4. Background Information

A. The applicant's complete name, address and telephone number:

Minnesota Soybean Processors
100 Caspian Ave
Box 500
Volga, SD 57071
Attn: Tom Kersting
Telephone: 1.605.627.6124

B. The complete name, title, address and telephone number of the official or agent to be contacted concerning the applicant's filing:

Mr. Douglas M. Lee, P.E.
Great Plains Natural Gas Co.
Project Manager
400 North Fourth Street
Bismarck, ND 58501
Telephone: 1.701.224.5857
Cellular Telephone: 1.701.391.0528

C. The signature and title of the person authorized to sign the application is:

Douglas M. Lee, P.E. Project Manager

D. A brief description of the proposed project:

(1) General location:

Minnesota Soybean Processors (MnSP) proposes to construct a natural gas pipeline from an interconnection with Northern Natural Pipeline Company (NNPL) near Brewster, MN to the MnSP processing plant under construction near Brewster, MN.

The proposed 6.4-mile natural gas pipeline will begin at a tap on the Northern Natural Pipeline in the northwest ¼ of Section 30 in Ewington Township in Jackson County approximately 133 feet east of the section line (the centerline of TH-264) and 503 feet south of the north section line. The pipeline then runs north approximately 573 feet to a point approximately 70 feet north of the centerline of Jackson County Road Number 34. Then, it turns west to a point about 600 feet west of Trunk Highway 264 (the road dividing Nobles and Jackson County). From this point, the line will proceed northward,

approximately 600 feet west of Highway 264 Nobles County Road 1) through Lorain and Hersey Townships. The proposed pipeline will terminate at the Minnesota Soybean Processors plant under construction in the southeast ¼ of Section 24 in Hersey Township just north of Brewster.

(2) Planned use and purpose:

The proposed pipeline will provide natural gas service to MnSP for use in the processing of soybeans and minor consumption associated with routine plant operations.

(3) Estimated costs:

The proposed project is estimated to cost \$1,100,000.

(4) Planned in-service date:

October 1, 2003

(5) General design and operational specifications of the type of pipeline which and application is submitted:

The proposed 4 1/2-inch pipeline will be welded steel, fusion bonded epoxy coated pipe. The proposed Maximum Allowable Operating Pressure (MAOP) for the new pipeline facility will be 720 psig.

4415.0120 DESCRIPTION OF PROPOSED PIPELINE AND ASSOCIATED FACILITIES

Subpart 1. Pipeline Design Specifications

The specifications for pipeline design and construction are assumed to be in compliance with all applicable state and federal rules or regulations unless determined otherwise by the state or federal agency having jurisdiction over the enforcement of such rules or regulations. For public information purposes, the anticipated pipeline design specifications must include but are not limited to:

The United States Department of Transportation Safety Regulations, Title 49 Code of Federal Regulations (CFR) Part 192, prescribes minimum federal safety standards for construction, operation and maintenance of natural gas pipelines. MnSP will comply with safety standards for construction, operation and maintenance of natural gas pipelines. MnSP will comply with 49 CFR Parts 191, 192, and 199 in constructing, operating and maintaining the proposed line. Pipeline safety matters for this facility are under the jurisdiction of the Minnesota Office of Pipeline Safety ("OPS").

A. Pipe Size (outside diameter) in Inches:

4.50 inches

B. Pipe Type:

API 5L, X52, ERW

American Petroleum Institute (API) is a published specification for high-test line pipe. This specification covers various grades of seamless and welded steel line pipe. Process of manufacture, chemical and physical requirements, methods of test, dimensions and other parameters are specified. Grade designates pipe manufactured according to API specification 5L with specified minimum yield strength (SMYS) designated in pounds per square inch. ERW has one longitudinal seam, which is formed by electric resistance welding during the manufacturing process

C. Nominal Wall Thickness in Inches:

| | Outside Diameter (in.) | Wall Thickness (in.) |
|-------------------|------------------------|----------------------|
| Mainline | 4.50 | 0.156 |
| Roads and Streams | 4.50 | 0.237 |

D. Pipe Design Factor:

0.72

E. Longitudinal or Seam Joint Factor:

1.0

F. Class Location and Requirements, Where Applicable:

Class 1

Class location determines which design factor safety value is used in the design formula. The following design factor safety value used for natural gas steel pipeline are based on requirements of 49 CFR 192.111:

G. Specified minimum yield strength in pounds per square inch:

Pipe used on this project will have a minimum specified yield strength of 52,000 psi.

H. Tensile strength in pounds per square inch:

In accordance with API 5L, Pipe used on this project will have a minimum tensile strength of 66,000 psi.

Subpart 2. Operating Pressure.

A. Operating Pressure - Pounds per Square Inch Gauge (psig):

The normal operating pressure of this facility will be between 400 psig and 720 psig.

B. Maximum Allowable Operating Pressure (psig)

The maximum actual operating pressure of the proposed pipeline will be 720 psig.

Subpart 3. Description Associated Facilities

For public information purposes, the applicant shall provide a general description of all pertinent associated facilities on the right-of-way.

This project will have above ground valves at the beginning and end of the pipeline along with associated launching and receiving scraper traps. At the NNPL end, there will be regulation and measurement facilities aboveground. MnSP will install marker posts along the route to identify the location of the buried facilities. Typically, these are installed at property boundaries and/or roads to minimize interference with land utilization. At approximately, one-mile intervals and adjacent to the marker posts, MnSP will install electrolysis test stations to monitor the effectiveness of cathodic protection efforts. At the North end, the line will terminate at the MnSP plant presently under construction.

Subpart 4. Product Capacity Information

The applicant shall provide information on planned minimum and maximum design capacity or throughput in the appropriate unit of measure for the types of product shipped as defined in part 4415.0010.

The proposed pipeline and associated facilities are designed to have a maximum throughput capacity of 5,000 MCF per day. The minimum throughput design is 2,400 MCF per day.

Subpart 5. Product Description

The proposed pipeline will carry natural gas (methane), a non-hazardous, but highly flammable substance, for use by MnSP in processing agricultural products (soybeans).

Subpart 6. Material Safety Data Sheet

A Material Safety Data Sheet (MSDS) for natural gas is included in the following pages.

MSDS

Product Name: Processed Natural Gas
Product Code: None

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Processed Natural Gas
Product Code: None
Synonyms: Dry Gas
Generic Name: Natural Gas
Chemical Family: Paraffin hydrocarbon
Responsible Party: Unocal Corporation
Union Oil Company of California
14141 Southwest Freeway
Sugar Land, Texas 77478
For further information contact MSDS Coordinator
8am – 4pm Central Time, Mon – Fri: 337-295-6198

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:

For Chemical Emergencies: For Health Emergencies:
Spill, Leak, Fire or Accident California Poison
Call CHEMTREC Control System
North America: (800) 424-9300 Cont. US: (800) 356-3129
Others: (703) 527-3887 (collect) Outside US: (415) 821-5338

Health Hazards: use with adequate ventilation

Physical Hazards: Flammable gas. Can cause flash fire. Gas displaces oxygen available for breathing. Keep away from heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment). Do not enter storage areas or confined space unless adequately ventilated.

Physical Form: Gas

Appearance: Colorless

Odor: Odorless in the absence of H₂S or mercaptans

NFPA HAZARD CLASS: Health: 1 (slight)

Flammability: 4 (extreme)

Reactivity: 0 (least)

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS % Weight EXPOSURE GUIDELINES

Limits Agency Type

Methane 98 1000 ppm MSHA TWA

CAS# 74-82-8

Carbon Dioxide 0-5 5000 ppm ACGIH TWA

CAS# 124-38-9 30000 ppm ACGIH STEL

5000 ppm OSHA TWA

5000 ppm MSHA TWA

5000 ppm Cal. OSHA TWA

30000 ppm Cal. OSHA STEL

Nitrogen 0-5 1000 ppm MSHA TWA

CAS# 7727-37-9

Ethane 1 1000 ppm MSHA TWA

CAS# 74-84-0

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

Eye: Not expected to be an eye irritant.

Skin: Skin contact is unlikely. Skin absorption is unlikely.

Inhalation (Breathing): Asphyxiant. High concentrations in confined spaces may limit oxygen available for breathing.

Ingestion (Swallowing): This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Signs and Symptoms: Light hydrocarbon gases are simple asphyxiants which, at high enough concentrations, can reduce the amount of oxygen available for breathing. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. High concentrations of carbon dioxide can increase heart rate and blood pressure.

Cancer: No data available.

Target Organs: No data available.

Developmental: Limited data – see other comments, below.

Other Comments: High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus. Exposure during pregnancy to high concentrations of carbon monoxide or carbon

dioxide, which are produced during the combustion of hydrocarbon gases, can also cause harm to the developing fetus.

Pre-Existing Medical Conditions: None known.

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: First aid is not normally required. However, it is good practice to wash any chemical from the skin.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, immediately begin artificial respiration. If breathing difficulties develop, qualified personnel should administer oxygen. Seek immediate medical attention.

Ingestion (Swallowing): This material is a gas under normal atmospheric conditions and ingestion is unlikely.

5. FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point, not applicable (gas)

OSHA Flammability Class: Flammable gas

LEL / UEL: No data

Auto-ignition Temperature: 800-1000 °F

Unusual Fire & Explosion Hazards: This material is flammable and can be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Vapors may travel considerable distances to a source of ignition where they can ignite, flashback, or explode. May create vapor/air explosion hazard indoors, outdoors or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Closed containers exposed to extreme heat can rupture due to pressure buildup.

Extinguishing Media: Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk.

6. ACCIDENTIAL RELEASE MEASURES

Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended. Stay upwind and away from spill/release. Notify persons down wind of spill/release; isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Notify fire authorities and appropriate federal, state and local agencies. Water spray may be useful in minimizing or dispersing vapors (see Section 5).

7. HANDLING AND STORAGE

Handling: The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Do not enter confined spaces such as tanks or its without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 2 and 8). Use good personal hygiene practice.

Storage: Keep container (s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces and all sources of ignition. Post area "No Smoking or Open Flame". Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container (s) against physical damage. Outdoor or detached storage is preferred.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additionally ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

Personal Protective Equipment (PPE):

Respiratory: Wear a positive pressure air supplied respirator in oxygen deficient environments (oxygen content <19.5%). A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: Not required based on the hazards of the material. However, it is considered good practice to wear gloves when handling chemicals.

Eye/Face: While contact with this material is not expected to cause irritation, the use of approved eye protection to safeguard against potential eye contact is considered good practice.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed. Self-contained respirators should be available for non-routine and emergency situations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: Not applicable (gas)

Flammable/Explosive Limits (%): No data

Auto-ignition Temperature: 800-1000°F

Appearance: Colorless

Physical State: Gas

Odor: Odorless in the absence of H₂S or mercaptans

Vapor Pressure (mm Hg): No data

Vapor Density (air=1): <1

Boiling Point: -259°F

Freezing/Melting Point: No data

Solubility in Water: Slight

Specific Gravity: 0.30+ (Air=1)

Percent Volatile: 100 vol%

Evaporation Rate: (nBuAc=1): N/A (gas)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of storage and handling.

Conditions to Avoid: Avoid all possible sources of ignition (see Section 5 & 7)

Incompatible Materials: Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: Combustion can yield carbon dioxide and carbon monoxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

No definitive information available on carcinogenicity, mutagenicity, target organs or developmental toxicity.

12. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA “characteristic” hazardous waste due to the characteristic (s) of ignitability (D001). If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material is subject to the land disposal restriction in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more

stringent than the federal requirements. Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum re-conditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

13. TRANSPORT INFORMATION

DOT Proper Shipping Name / Technical Name: Hydrocarbon Gas, Liquefied
N.O.S. (Methane)
Hazard Class or Division: 2.1
ID#: UN1965

14. REGULATORY INFORMATION

This material contains the following chemicals subject to the reporting requirements of **SARA 313** and 40 CFR 372: --None--

This material has not been identified as a carcinogen by NTP, IARC, or OSHA.

EPA (CERCLA) Reportable Quantity: --None—

15. DOCUMENTARY INFORMATION

Issue Date: 11/29/99
Previous Issue Date: 3/29/99
Product Code: None
Previous Product Code: None

16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued.
HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.

This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

4415.0125 LAND REQUIREMENTS

For the proposed pipeline, the applicant shall provide the following information:

A. Permanent right-of-way length, average width, and estimated acreage.

The proposed pipeline right of way is approximately 6 miles in length. The proposed pipeline would be placed on a permanent right of way 30 feet in width. Approximately 22 acres of new right of way would be acquired.

B. Temporary right-of-way (workspace) length, estimated width, and estimated acreage.

Along most of the route an additional 20 feet of temporary workspace will be acquired. It is anticipated that this space would not be fully utilized but would give the construction crews approximately 50 feet of right-of-way for workspace if needed. Localized conditions such as roads, railroads and water body crossings may require temporary additional workspace to complete the installation. Permission to use temporary workspace will be obtained from landowners adjacent to the permanent right-of-way. Approximately 15 acres of temporary workspace will be acquired.

C. Estimated range of minimum trench or ditch dimensions including bottom width, top width, depth and cubic yards of dirt excavated.

Trenching is typically accomplished using a crawler-mounted, wheeled-type ditch digging machine or backhoe. Typically the ditch will be 60 inches deep to allow sufficient cover as specified by statute. Trench width will be a minimum of 12-inches for the 4.5-inch outside diameter pipe. Assuming the maximum possible depth this project will result in approximately 5,900 cubic yards of soil excavation.

The State of Minnesota requires a minimum depth of cover to be 54 inches in certain areas as detailed in Minnesota Statutes 116I.06, Subdivisions 1,2,3. MnSP will require a minimum of 54 inches of ground cover for this proposed pipeline. Federal minimum cover requirements range from 18 inches to 48 inches depending on the circumstances encountered.

D. Rights-of-way sharing or paralleling; type of facility in the right-of-way, and the estimated length, width, acreage of the right-of-way.

The preferred route for this pipeline is approximately 600 feet west of the nearest north-south section line road. The landowners suggested that this was the best location for the pipeline. After reviewing the route and alternatives, MnSP agreed that their proposed route was acceptable. The proposed pipeline is parallel to, but offset approximately 600 feet from the township road rights-of-way and an existing medium pressure plastic natural gas pipeline owned by Aquilla. MnSP looked at alternate routes that encroached on wetlands and other areas that would impact

the environment or present difficult construction problems. MnSP investigated opportunities to share or parallel any existing rights-of-way that would not increase the impact of the project. The preferred route minimizes the impacts to the landowners while ensuring the safety of the pipeline.

4415.0130 PROJECT EXPANSION

If the pipeline and associated facilities are designed for expansion in the future, the applicant shall provide a description of how the proposed pipeline and associated facilities may be expanded by looping, by additional compressor and pump stations, or by other available methods.

The proposed gas pipeline is designed to meet the natural gas supply needs of MnSP's current and future needs. No plans for expansion have been incorporated into the design.

4415.0135 RIGHT-OF-WAY PREPARATION PROCEDURES AND CONSTRUCTION ACTIVITY SEQUENCE.

Each applicant shall provide a description of the general right-of-way preparation procedures and construction activity sequence anticipated for the proposed pipeline and related facilities.

RIGHT-OF-WAY

The first step in construction of a pipeline is to prepare the Right-of-Way (ROW). The centerline of the pipeline and points of intersection tangents (PI's) will be established by a survey. Staking will be at a maximum of 400-foot intervals.

The contractor will clear crops from the 50 feet wide ROW as needed. Aboveground vegetation and obstacles would only be cleared as necessary to allow safe and efficient use of construction equipment.

Storage areas required for equipment, pipe, and other materials would be on MnSP property at the MnSP plant north of Brewster.

The one fence crossing will be adequately braced before making any opening. Any damage to fences, gates and cattle guards will be restored to the original condition or replaced. Access and livestock control would be employed during construction to limit impact to the use of the land.

CLEARING/GRADING

Clearing of the ROW would follow accepted industry practices and sound construction guidelines. For this project, the predominate land use is agricultural farming. MnSP proposes to install pipe under all tree rows (windbreaks) using boring or directional drilling

techniques that preserve the trees and surrounding area. Debris created from ROW preparation will be disposed of using approved methods during restoration.

When the construction area is clear of obstacles and prior to trenching, the Contractor will grade the area as is necessary to create a relatively flat work surface for the passage of heavy equipment and vehicles for subsequent construction activities. Minimal grading would be required on most of the ROW where the terrain is flat to gently sloping.

TRENCHING

The Contractor will perform most trenching using a bucket-wheel ditching machine. However, the Contractor may use conventional tracked backhoes where ground conditions are unsuitable for a ditching machine or where they can expedite excavation.

Trench dimensions will comply with applicable normal land use and regulatory requirements. To insure the pipe is at the proper depth, the trench is drained or pumped dry where practicable. Where the pipe crosses highway or road ditches, the excavation of trenches or borings is deep enough to provide a minimum of 54 inches of cover over the pipe to comply with Minnesota Department of Transportation (MNDOT) requirements. All surfaced road crossings will be bored, to avoid interrupting traffic flow.

In areas where there is a need to separate top and subsoil, a two-pass trenching process would be used. The first pass removes topsoil and stockpiles it along the outer edge of the right-of-way. The second pass removes subsoil and stockpiles it adjacent to the top soil in such a manner as to avoid mixing of the two-soils. This allows for proper restoration of the soil during the backfilling process. The contractor places the sub-soil in the ditch first, and then finishes the backfill process with the topsoil. Spoil banks may have gaps to prevent storm runoff water from backing up or flooding.

STRINGING

The operation of stringing involves the placement of pipe, from pipe storage areas at the Brewster Plant, along the ROW. Pipe will be loaded onto trucks, transported to the ROW, and unloaded. The pipe would be strung either prior to or after ditching.

BENDING

After the joints of pipe are strung along the trench and before the sections of pipe are joined together, individual sections of the pipe are bent to allow for uniform fit of the pipeline with the varying contours of the bottom of the trench and to accommodate changes in the route direction. A track-mounted, hydraulic pipe-bending machine is normally used for this purpose when using the size of pipe proposed for this project.

MnSP limits the number of degrees of deflection in a field bend is limited to 1-1/2 degrees per foot per diameter inch. Bends required that are greater than that allowed in the field are factory fabricated.

LINE-UP

Installation of the pipe, following the bending, commences with internally swabbing the pipe, and aligning the bevels for welding. The weld material is deposited after the proper spacing and alignment of the bevels is accomplished. The line up clamp is held until enough of the weld is completed to assure weld integrity.

WELDING

A very important phase of pipeline construction is the welding process. Welding is the joining of the individual sections of pipe to form the pipeline. Only qualified welders using qualified procedures can weld on this project to meet code requirements. To maintain the rigorous qualifications for certification of pipeline welding, welders periodically take weld tests.

A third party radiographic contractor will inspect approximately fifty percent of the welds using radiographic examination to determine the quality of the weld. Radiographic examination is a nondestructive method of inspecting the inner structure of welds to determine if any defects are present. Defects will be repaired or removed as outlined in API 1104, the code for "Welding of Pipelines and Related Facilities" which is incorporated by reference by 49 CFR 192.

COATING AND LOWERING-IN

After welding, the girth weld and the pipe adjacent to the weld must be protected from corrosion. When the field coating or wrapping of the weld is completed, the pipeline is ready to lower into the trench.

Special side boom tractors spread out along the pipeline simultaneously, lift the line and move it over the open trench. The welded string of pipe is then lowered into the trench.

An electronic holiday detector monitors the coating during this operation to assure there is no damage to the coating. The detector is pulled along the circumference of the pipe and uses electrical voltage to find any voids in the coating.

BACKFILL

After lowering the pipe into the ditch, the contractor backfills the trench by placing the subsoil in the trench first and then placing the topsoil in the trench last. Additionally, the contractor is cautious to ensure that there is no damage to the pipe and pipe coating from equipment or from backfill material. Because of some intermingling of the soils, farmers may experience a slight decline in productivity in the soil above the pipeline. To compensate farmers for this lost production, MnSP agreed to pay landowners damages for three years worth of production across the entire right-of-way.

TESTING

After backfilling, the pipeline would be tested to ensure that the system is capable of withstanding the operating pressure for which it was designed. The pipeline is filled with water and a pressure equal to 1.5 times the design pressure is maintained for a minimum of eight (8) hours. Water availability and terrain conditions would determine test lengths. Test water would be disposed of as per permit requirements.

CLEAN-UP AND RESTORATION

The final phase of pipeline construction involves cleaning up and restoring the ROW. Removal and disposal of construction debris and any surplus materials is part of the clean up. Restoration of the ROW surface involves smoothing by chisel plow or disc harrows or other equipment, and stabilizing when necessary. In non-cropland, the ROW is re-vegetated according to agreement with the landowner or appropriate government agency.

4415.0140 LOCATION OF PREFERRED ROUTE AND DESCRIPTION OF ENVIRONMENT

Subpart 1 Preferred route location

The application must identify the preferred route for the proposed pipeline and associated facilities on any of the following documents, which must be submitted with the application:

- A. United States Geological Survey topographical maps to the scale of 1:24,000, if available;**
- B. Minnesota Department of Transportation County Maps:**
- C. Aerial photos or other appropriate maps of equal or greater detail in items A and B. The maps; or photos may be reduced for inclusion in the application. One full sized set shall be provided to the board.**

County highway maps and aerial photographs showing the location of the proposed route are provided in the Maps section of the application.

Subpart 2. Other route locations

MnSP also looked at an alternative route along the west side of Nobles County Road 1, but found an existing fiber-optics line in the road rights-of-way. Landowners specifically requested that the pipeline be placed along the preferred alignment such that it minimizes impacts to farmsteads along the route.

Subpart 3. Description of environment

The applicant must provide a description of the existing environment along the preferred route.

Human Settlement and Population Density

The proposed pipeline will be installed in rural areas of Nobles and Jackson counties in southwestern Minnesota. The land use is predominately farming with few farmsteads along the route. Very few buildings intended for human occupancy or other structures are within 500 feet of the proposed route. The route passes within one (1) mile of Brewster, Minnesota where the plant is under construction. The route does not pass through any population centers. There are approximately 14 parcels of property crossed by the route. Except for public roads, the proposed pipeline passes through private land for the entire length of the route. The route crosses Interstate 90 approximately one and one-half miles north of the south terminus. It will also cross six section line roads.

According to the National Wetlands Inventory maps and the Minnesota DNR, the proposed route - except for the riparian areas at water crossings - crosses no wetlands.

The general terrain is conducive to pipeline construction.

Soils

Well to very poorly drained loamy soils formed in yellowish to olive brown, calcareous loam till, of Des Moines Lobe Origin are dominant. Much of the flat area along the route is artificiality drained to improve agricultural conditions. Most of the soils along the route are classified as prime farmland by the Soil Conservation Services (SCS).

Water

Two (2) stream crossings have been identified along the route of the proposed pipeline. The pipeline will cross Okabena Creek and Elk Creek, neither are listed as protected waters by the DNR. The proposed method of crossing will be directional drilling such that there are negligible impacts to the streams. All appropriate permits will be secured prior to crossing streams.

Vegetation and Wildlife

Impacts to vegetation and wildlife along the proposed route are expected to be minimal due to the general lack of cover and habitat present. Vegetation along the primary pipeline route predominantly consists of cultivated land with some secondary grassland surrounding streams and farmsteads. All waters crossed by the proposed pipeline route are classified as warm water and may contain species typical to warm water habitats. Wildlife species found along the pipeline route are typical to species found in an agricultural setting.

A DNR Stream Crossing permit application has been submitted to the Regional DNR office. Preliminary telephone conversations with DNR representatives indicated some concerns with stream crossings related to protecting the Topeka shiner (a State listed species of Special Concern). DNR officials indicated a preference that stream crossings in the area should be directionally drilled whenever possible.

Cultural Resources

The Minnesota Historical Society State Historical Preservation Office (SHPO) was contacted to review the route pursuant to the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act. SHPO review is pending.

Special Areas

The Minnesota DNR was contacted to review the Natural Heritage database to determine if any rare plant or animal species or other significant natural feature might be impacted by the proposed project. Natural Heritage database review is pending.

4415.0145 ENVIRONMENTAL IMPACT OF PREFERRED ROUTE

The applicant must also submit to the board along with the application an analysis of the potential human and environmental impacts that may be expected from pipeline right-of-way preparation and construction practices and operation and maintenance procedures. The impacts include but are not limited to the impacts for which criteria are specified in part 4415.0040 or 4415.0100.

An analysis of the impacts from construction of the proposed pipeline indicates they would be temporary. No long-term impacts are anticipated. The pipeline would be installed almost entirely in cultivated cropland that would continue to be used for the same purpose after the project was completed. Specific analyses of the impacts are identified as follows.

Human Settlement and Population Density

Some short-term socioeconomic effects would occur to the population centers along the route. Approximately half of the anticipated work force would be from outside the local area. Their economic activities (e.g., housing rental, hotels, fuel sales, restaurants, and grocery stores) would add to the economies of some of the population centers along the route. About the same number of local workers would be employed which would increase the amount of local payrolls during the construction period.

No significant or long-term demands for local government facilities or services would occur because of the relatively short construction period.

Impacts to existing roads within the project area would be short-term and minimal. Paved roads would be bored as well as any important or heavily traveled gravel roads. This would eliminate most all impact to traffic. No new roads would be constructed. Necessary road crossing permits would be obtained from state or local authorities.

There will be no Impacts to existing railroads.

No compression facilities are to be installed on the proposed pipeline.

The pipeline does not generate any noise under normal operations. During construction, the machinery generates noise between 75-90 decibels within 50 feet of the equipment. The noise is typical of the machinery that is used in tilling, harvesting and other agriculture operations. Equipment noise impact would be short-term as the construction process moves continuously along the right-of-way.

Land Use

Land within the permanent right-of -way and any temporary workspace would be impacted during the construction period. The impact would be short-term, as the construction period normally will last about thirty- (30) days at any one location.

All land would be restored as nearly as practicable to pre-construction conditions. No land would be removed from agricultural use since the pipeline would be buried well below plow depth and drain tile. The cropland could return to production as soon as construction was completed. Farmers will receive compensation for reduced productivity for the year of construction and the following two years.

All agriculture uses will continue within the new permanent right-of-way after completion of this project.

Construction may affect appurtenant agriculture items such as drainage systems, fences and livestock. When active tile drainage systems are encountered temporary repairs will be made immediately to allow continuation of flow. A local tile contractor will make permanent repairs prior to the start of restoration activities.

The contractor will install a temporary gap in the one fence crossed by this project. The Contractor will rebuild the fence where it is crossed.

If it is necessary for livestock or farm machinery to cross the open trench, equipment bridges or trench plugs will be strategically located to allow access. The Contractor will use appropriate fencing or other means to prevent livestock from falling into open trenches.

Terrain and Geology

Little or no impact to the terrain and geology should result from construction, operation or maintenance of the pipeline facilities. No special construction techniques are expected to be necessary because of the terrain or geology. Impacts would be limited to the construction phase.

Along the proposed route, the terrain is level to gently rolling with little or no elevation change. Little or no grading is anticipated in order to prepare the surface for the construction equipment over most of the route.

Sand and gravel are likely the primary mineral resource occurring along the proposed pipeline route. No active mining operation would be directly affected by the construction of the pipeline. However, reserves within the permanent right-of-way could not be utilized for the life of the project.

There are no active faults located across or along the route of the proposed pipeline. Seismic activity in the area has been very limited. Since pipeline damage is usually associated with a large-scale catastrophic seismic event and no such earthquake has been recorded in the project area, the probability of damage to the pipeline due to earthquake is unlikely. Damage to the pipeline due to landslides is also unlikely because the proposed route would be in generally flat terrain.

Soils

The primary effect of pipeline construction on soils is erosion associated with disturbing the vegetative cover and loss of soil productivity due to soil mixing and/or compaction. Mixing of topsoil with sub-soil could affect productivity of cropland.

Soil segregation practices eliminate virtually all mixing of topsoil and subsoil. MnSP will employ topsoil segregation methods in annually cultivated or rotated agricultural lands. The contractor will use double ditching techniques that involve removing the top soil first to a stockpile along the outer edge of the easement. Then a second excavation will remove the sub-soil to a stockpile adjacent to the top soil. After installing the pipe, the contractor replaces the subsoil first and then the top soil such as to maintain soil segregation. MnSP will suspend construction activity on the right-of-way when conditions such as wet weather were conducive to soil compaction.

Chisel or other type plowing, and/or other measures, during restoration of the affected area will mitigate soil compaction. Temporary and permanent erosion control measures will be employed during construction to minimize erosion caused by water and wind.

Soil loss by wind could likely occur when the right-of-way area is very dry after the vegetative cover has been removed. During construction, activity would be limited when there was enough wind to cause erosion. It is typical to control dust during the construction phase with water applied by spray bars mounted on trucks equipped with

water tanks. Excessive dust is detrimental to construction activities and is controlled diligently to avoid loss of production and to promote safety. After construction, restoration of the right-of-way in non-cropland areas includes seeding and mulching that help prevent further dust omissions. Impact to soils would be short term.

Water

a. Groundwater

Construction of the proposed pipeline may cause minor impact on groundwater flow in localized areas, but would not affect overall groundwater recharge in the project area. Groundwater is not a major source of drinking water in the area. Construction equipment could also cause compaction of soils, resulting in locally reduced water infiltration rates.

The pipeline trench would generally be approximately 5 feet deep and would not intersect aquifers. In low-lying areas, de-watering of the trench may be required and could temporarily affect groundwater levels in the immediate vicinity of the trench.

Impacts to groundwater would be short term. Construction of the proposed pipeline would not require the installation or abandonment of any water wells or connection to or changes in any public water supply. There were no wells within 500 feet of the proposed pipeline.

Refueling of vehicles, or the transportation and storage of fuel, oil and other hazardous liquids could create a contamination hazard to aquifers. Accidental spills or leaks of hazardous liquids could contaminate soil and groundwater. Contaminated soils could continue to leach pollutants to the groundwater for an extended period after the spill or leak. MnSP will prohibit refueling activities and storage of hazardous liquids within at least a 200-foot radius of all private wells and at least a 400-foot radius of all municipal or community water supply wells. In addition, MnSP has developed a Spill Prevention, Containment, and Countermeasure (SPCC) Plan that describes the preventive and mitigative measures that would be implemented to minimize the impact associated with such occurrences.

b. Surface Water

The pipeline will not cross any major streams or large bodies of water. Accordingly, the risk of damage resulting from activities associated with this project is negligible. MnSP proposes to cross the streams using directionally drilling techniques on the two stream crossings. Therefore, risk of contamination to surface waters is negligible.

Hay bales or other appropriate materials would contain any inadvertent releases of drilling fluids. The Contractor will use vacuum or sump pumps to clean up and transfer the drilling fluids back to the entry or exit points of the drilling mud pits for either reprocessing or disposal.

Prior to placing the pipeline in service, the contractor will hydrostatically test the pipeline. MnSP proposes to withdraw approximately 24,000 gallons from local water supplies. MnSP would screen water intakes to prevent entrapment of fish and debris, and would neither withdraw nor discharge water during critical fish spawning periods. No chemicals would be added to the hydrostatic test water. The water would be tested during withdrawal, after the pipeline is filled, and during discharge. Discharge would be back into local drainages or other locations as per permit requirements dictate. The discharge rate would be regulated and splash plates or other similar devices installed to disperse the discharge to prevent erosion, streambed scour, suspension of sediments, or excessive stream flow. MnSP will obtain a hydrostatic test water appropriation permit from the Minnesota DNR and the discharge permit from the Minnesota Pollution Control Agency. Impact would be minimal and short term.

Vegetation and Wildlife

a. Vegetation

Agricultural fields planted predominantly in corn and soybeans are the dominant vegetation types that would be crossed by the proposed pipeline. Agricultural and grasslands would quickly re-vegetate to pre-construction conditions following construction. Clearing of the right-of-way in non-agricultural areas would be limited to the minimum amount required to safely install the proposed pipeline. After construction, MnSP would only maintain a minimum amount of cleared right-of-way for operations and maintenance purposes. Construction of the proposed pipeline would result in short term impact to vegetation and not cause any appreciable change in the type of vegetation cover.

b. Wildlife

Construction of the proposed facilities would likely result in temporary impact on wildlife habitat, as well as minor, temporary impact on wildlife in the immediate vicinity of the construction areas. Clearing of vegetation would result in reduced cover, nesting and foraging habitat for some wildlife. Species that are more mobile would be temporarily displaced from the construction areas to similar habitats nearby.

In as much as the route is primarily in agricultural use, vegetation maintenance will not be necessary.

Special Areas

The Minnesota DNR was contacted to review the Natural Heritage database to determine if any rare plant or animal species or other significant natural feature might be impacted by the proposed project.

Surface Water Runoff - Immediate Receiving Waters

Since MnSP will be directionally drilling the Okabena Creek and Elk Creek, impacts to surface waters are negligible.

4415.0150 RIGHT-OF-WAY PROTECTION AND RESTORATION MEASURES

Subpart 1. Protection

The applicant must describe what measures will be taken to protect the right-of-way or mitigate the adverse impacts of right-of-way preparation, pipeline construction, and operation and maintenance on the human and natural environment.

MnSP has developed a comprehensive Pollution Control and Spill Prevention (SPCC) procedure that deals with the protection, mitigation and restoration measures employed for a pipeline project. All of the Federal Energy Regulatory Commission measures for “Upland Erosion Control, Re-vegetation, and Maintenance Plan” and “Wetland and Waterbody Construction and Mitigation Procedures” relative to pipeline projects have been incorporated into the SPCC document. This document is available from MnSP upon request. The SPCC document is included in the construction specifications attached to the prime contractor’s agreement. It is an integral part of the construction inspection process and the relevant portions, or the documents in their entirety will be issued to construction personnel and all contractors associated with the work.

In addition to those measures addressed by the SPCC plan, MnSP will comply with the requirements of regulatory and permitting agencies such as the Army Corps of Engineers, Minnesota DNR and other agencies that may include conditions with permits. Almost the entire route is located on private property. Landowners will participate in developing the measures taken to mitigate any impacts to the land during construction or operation of the pipeline.

Subpart 2. Restoration

The applicant must describe what measures will be taken to restore the right-of-way and other areas adversely affected by construction of the pipeline.

Minnesota Rules Section 4415.0195 allows certain construction related activities such as tile repair, soil segregation, livestock and crop protection, repair to private roads and fence and gate repair or replacement to be negotiated with the landowner. MnSP would generally not initiate negotiations for these tasks but would expect to perform them with contractor personnel. One restoration item that is traditionally negotiated with landowners is reseeding of non-cropland areas such as pastureland. The Minnesota Environmental Quality Board will attach the following conditions to the

routing permit as per the above-mentioned MN 4415.0195 relative to right-of-way preparation, construction, clean up, and restoration:

- A. The Company shall comply with all applicable state rules and regulations.
- B. The Company shall clear the right-of-way only to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the pipeline.
- C. Stream banks disturbed by pipeline construction must be stabilized using native plant species indigenous to the project area, or by other methods as required by applicable state and/or federal permits.
- D. Precautions shall be taken to protect and segregate topsoil in cultivated lands unless otherwise negotiated with the affected Landowner.
- E. Compaction of cultivated lands by the Company must be kept to a minimum and confined to as small an area as practicable.
- F. Precautions to protect livestock and crops must be taken by the Company unless otherwise negotiated with the affected Landowner.
- G. All appropriate precautions to protect against pollution of the environment must be taken by the Company.
- H. All waste and scrap that is the product of the pipeline construction process must be removed or properly disposed of before construction ends.
- I. Clean up of personal litter, bottles, and paper deposited by right-of-way preparation and construction crews must be done on a daily basis.
- J. The Company shall repair or replace all drainage tiles broken or damaged during right-of-way preparation, construction and maintenance activities, unless otherwise negotiated with the affected Landowner.
- K. The Company shall repair all private roads and lands damaged when moving equipment or when obtaining access to the right-of-way, unless otherwise negotiated with the affected Landowner.
- L. The Company shall repair and replace all fences and gates removed or damaged as a result of right-of-way preparation, construction, and maintenance activities, unless otherwise negotiated with the affected Landowner.
- M. Shelterbelts and trees must be protected by the Company to the extent possible in a manner compatible with the safe operation, maintenance and inspection of the pipeline. MnSP proposes to directionally drill under shelterbelts and trees affected by the construction.
- N. The Company shall, to the extent possible, restore the area affected by the pipeline to the natural conditions that existed immediately before construction of the pipeline. Restoration must be compatible with the safe operation, maintenance, and inspection of the pipeline.

4415.0160 OPERATIONS AND MAINTENANCE

Pipeline operations and maintenance are assumed to be in compliance with all applicable state and federal rules or regulations, unless determined otherwise by the state or federal agency having jurisdiction over the enforcement of such rules or regulations. For public information purposes, the applicant must provide a

general description of the anticipated operation and maintenance practices planned for the proposed pipeline.

The pipeline is jurisdictional to the Minnesota Office of Pipeline Safety (MNOPS). All facilities proposed for the MnSP pipeline project would be designed, operated and maintained in accordance with DOT Minimum Federal Safety Standards in Title 49 of the CFR, Part 192 (49 CFR 192). These regulations are meant to ensure adequate protection for the public from failures of natural gas pipeline and related facilities. Part 192 defines and specifies the minimum standards for operating and maintaining pipeline facilities including the establishment of an Emergency Plan, which provides written procedures to minimize hazards from a gas pipeline emergency. Key elements of the plan include procedures for:

- Receiving, identifying, and classifying emergency events – gas leakage, fires, explosions and natural disasters;
- Establishing and maintaining communications with local fire, police and public officials, and coordinating emergency responses;
- Making personnel, equipment, tools and materials available at the scene of an emergency;
- Protecting people first and then property, and making them safe from actual or potential hazards, and
- Emergency shutdown of the system and safely restoring service.

The safety standards specified in Part 192 require each pipeline operator to:

- Develop an emergency plan, working with local fire departments and other agencies to identify personnel to be contacted, equipment to be mobilized, and procedures to be followed to respond to a hazardous condition caused by the pipeline or associated facilities;
- Establish and maintain a liaison with the appropriate fire, police and public officials in order to coordinate mutual assistance when responding to emergencies; and
- Establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a natural gas pipeline emergency and report it to appropriate public officials.
- Use only qualified personnel to operate and maintain the pipeline in accordance with an Operator Qualification Plan.
- Have, maintain and implement a Pipeline Integrity Management Plan for transmission lines in High Consequence areas.
- Ensure that personnel working on these facilities are part of a random drug testing program.

Before placing the pipeline in service, MnSP will prepare a procedural manual for operation, maintenance and emergencies to include the pipeline facilities of the proposed new pipeline. MnSP will operate its pipeline facilities in compliance with applicable pipeline safety regulations. MnSP will inspect and maintain its pipeline facilities in compliance with MNOPS regulations. MnSP will become a member of the Gopher State

Excavators One-Call system that is vital in helping to prevent damage to underground pipelines by excavators and others performing underground construction. Semi-annual inspections of the pipeline right-of-way would be conducted for gas leak detection and cathodic protection surveys would be conducted annually.

4415.0165 LIST OF GOVERNMENT AGENCIES AND PERMITS

Each application must contain a list of all the known federal, state, and local agencies or authorities and titles of the permits they issue that are required for the proposed pipeline and associated facilities.

The schedule shown lists all of the known government agencies or authorities and the titles of permits they issue required for the proposed pipeline project.

LIST OF GOVERNMENT AUTHORITIES

Unit of government, Title of Permit, Application Date, Status

Minnesota Environmental Quality Board Partial Exemption of Routing Permit, April 2003, Application Submitted

Minnesota Department of Natural Resources, License to Cross Public Waters, Pending
Minnesota Department of Natural Resources, Temporary Water Appropriation, Pending
Minnesota Department of Natural Resources, State Endangered Resources, Consultation, Pending

NPDES Discharge Permit for Hydrostatic Testing Water, pending
NPDES General Storm Water Permit for Construction Activity, pending

Minnesota Historical Society Project Review – Cultural Resources, pending
Minnesota Department of Transportation Utility Permits, pending
Road and Ditch Crossing Permits, pending